Presenting the ultimate WinSCHNIPP™ Help System:

<u>DISCLAIMER</u>

<u>Rule 1</u> (in using WinSCHNIPP™)

<u>Rule 2</u> (the obvious rule)

<u>Rule 3</u> (the rule of infallibility)

<u>Keyboard Commands</u> or: a life w/o mouse

<u>Mouse Commands</u> or: a life w/o keyboard

<u>Menu Commands</u> or: what the heck with all that bunch of commands

<u>The SCWASH™ System</u> or: there is in fact no easier way to handle a
            spectrum

<u>Command-Line Parameters</u> or: the importance of an ini-file

<u>Current Limitations:</u> what's not possible right now and perhaps never will be

<u>Credits</u>

Rule 1

I'm the one and only program to be used for handling, displaying, manipulating, integrating, density-mapping, etc... spectra. Of course, I'm the real one. You're not allowed to use other such programs but me! (This holds especially true for Mabuse, Mabuse 3.0, Mabuse für Windows, Mabuse für ... - for heavens sake, what else do we have to expect from mh?)

<u>BTW</u>: Watch Out For *WinSCHNIPP™ NT™*!

Rule 2

<u>WinSCHNIPP™</u> of course is the best spectrum program in the Free World and more than ever under the sun! (perhaps even in the whole universe)

WinSCHNIPP™ is SCHNIPP for MS Windows 3.1.

The name of the program therefore resembles a homage to SCHNIPP für DOS, developed by Rolf-Jürgen Berger, the program WinSCHNIPP™ originally descends from.

Der Bundesgesundheitsminister warnt:
PHYSIK
verändert den Charakter!

Credits

Thanks to the following persons for their valuable help in developing this *masterpiece* in software technology:

Mark Bends:
> für das Einbinden seiner Density Map-Routine in WinSCHNIPP™.

Rolf-Jürgen Berger:
> für seine programmiertechnische Hilfe nicht nur bei der Spektren-Darstellungsroutine.

Markus Hettlich:
> für seine wertvollen Hinweise v.a. bei der Windows-Einbindung des Projekts.

Volker Kukla:
> für seine ermutigende Wertschätzung dieses Programms:
> "WinSCHNIPP™ kannste in die Tonne treten!" (Originalzitat)
> and: for photographing his pentane density maps with WinSCHNIPP™

Rainer Lork: (Art-Director)
> für den Vorschlag der DoTheRainerLThing-Unit.
> and: for his suggestions in making the splash screen a **real** enjoyment

Marius Tybislawski:
> für das ausgiebige Betatesting von WinSCHNIPP™: 'Some People Just Know How To Find Bugs' (used by permission of NorthWest Airlines).

Thomas Wedekind:
> für die vielen aufmunternden Kommentare und Unterhaltungen (Gut, daß wir darüber gesprochen haben).

und last not least

Al Bundy:
> der die Entwicklung dieses Projekts überhaupt erst erträglich gemacht hat.

Command-Line Parameters

Due to multiple demands WinSCHNIPP™ now uses an ini-file (typically wschnipp.ini).
The various configurations of this program are saved to it - these can be accessed via the Settings dialog box.
To allow for *every* user in a network to individually save his settings, the functionality of WinSCHNIPP™ has been expanded by a command-line parameter.
Three possibilities are currently supported:

- no command line parameter: WinSCHNIPP reads the file wschnipp.ini in the actual Windows directory; if it doesn't exist the program will start up with default settings.
- constant command line parameter, e.g.: 'd:\stuff.ws\wschnipp.ini' :WinSCHNIPP™ reads this very file and interprets it as ini-file.
- variable command line parameter, e.g.: 'f:\users\%username%\ wschnipp.ini' :WinSCHNIPP finds out the environment variable username and again reads the corresponding file.

Known Bugs:
No validity check is done by WinSCHNIPP™ during read of the ini-file. If the program and ini-file versions are different this may cause problems.

DISCLAIMER OF WARRANTY

THIS SOFTWARE AND DOCUMENTATION ARE DISTRIBUTED "AS IS" AND
WITHOUT WARRANTIES AS TO PERFORMANCE, STABILITY, ACCURACY OR ANY
OTHER WARRANTIES WHETHER EXPRESSED OR IMPLIED.
BECAUSE OF THE VARIOUS HARDWARE AND SOFTWARE ENVIRONMENTS
INTO WHICH THIS PROGRAM MAY BE PUT, NO WARRANTY OF FITNESS FOR A
PARTICULAR PURPOSE IS OFFERED.

WHILE I HAVE MADE EVERY EFFORT TO TEST THE PRODUCT IN A WIDE
VARIETY OF OPERATING ENVIRONMENTS, GOOD PROCEDURE DICTATES THAT
ANY PROGRAM BE THOROUGHLY TESTED WITH NON-CRITICAL DATA BEFORE
RELYING ON IT.

THE USER MUST ASSUME THE ENTIRE RISK OF USING THE PROGRAM.

ANY LIABILITY OF THE AUTHOR WILL BE LIMITED EXCLUSIVELY TO REFUND OF
COMMITTED CONFIDENCE.

Keyboard Commands

Complete Listing of Keyboard Sequences used by WinSCHNIPP™:

Function Keys
F1	enlarge spectrum/spectra (i.e. yScale++)
F2	reduce spectrum/spectra (i.e. yScale--)
F3	expand spectrum/spectra
F4	condense spectrum/spectra
F5	
F6	
F7	
F8	
F9	plot all relevant channels (i.e. all channels up to EOW) of active spectra (rsp. of all displayed spectra if SynchronizeXScale is enabled)
F10	plot all channels of active spectra (rsp. of all displayed spectra if SynchronizeXScale is enabled)
F11	
F12	quick access to the 'Handling Spectra' dialog box

Alternate Keys
these keys are reserved for internal use of Windows™; therefore WinSCHNIPP™ doesn't use them despite the compatibility issue with Karl's Display™

Normal Keys
b	arrange baselines for active spectra
n	norm all active spectra to height of TCanvas (i.e. area where all graphical spectrum output occurs)
d	norm all active spectra in a dynamic way (i.e. norm this very spectrum that has the biggest count of all active spectra in the currently visible region to maximum y value, i.e. to height of screen, and simultaneously adjust the y scale factors, yScale, of all other active spectra to that of the "biggest one")
g	GoTo-function: hotkey to a compact dialog box, which allows quick access to a defined channel (or mass if a calibration is available)
'*x*'	toggle processing of one single spectrum [x=1..6]
0	toggle all spectra active/inactive - depending on the actual status of processing

Control Keys
Ctrl+TAB	record a TAB-stop for the channel being in the middle between both cursors
Ctrl+Shift+TAB	record a TAB-stop for the channel being in the middle of the screen
TAB	move spectrum ´forward´ to the next TAB-stop, respectively (i.e. the one, for which the channel number happens to be greater than the channel number of the middle of the screen)
Shift+TAB	dto., but ´backward´
r	record both actual cursor channels to the CursorMarker-collection; certain dialog boxes (as e.g. the Density Map dialog box) are filled by default with the two last pairs of cursor positions, respectively. This means a considerable ease of spectrum operations that require the specification of more than one region of channels
Ctrl+r	delete all entries from the CursorMarker-collection
Ctrl+l	toggle between linear and logarithm plot of spectra. (default at start-up is linear)

Cursor Keys

⊞ expand spectrum/spectra (similar to F3 - but around center of screen, not center of cursor(s))

⊞ condense spectrum/spectra (similar to F4 - but around center of screen, not center of cursor(s))

⊞ take a left: shift spectrum one notch to the right, i.e. get to see lower channels/masses

⊞ take a right: shift spectrum one notch to the left, i.e. get to see higher channels/masses

PG⊞ same as F1 - just easier to access when messing with cursor keys (cf. SCWASH™)

PG⊞ same as F2 - just easier to access when messing with cursor keys (cf. SCWASH™)

Numpad Keys (controlled by NumLock being active)

4 same as ⊞, but with much larger step rate

6 same as ⊞, but with much larger step rate

Current Limitations

Calibration: the values that can be entered by Mass have to be longint

Mouse Commands

<u>first:</u> what is it, a mouse? - how does he/she/it look like?
For that you have to go farther back to the evolution of our universe. Around $20*10_9$ years ago ...

Mouse Movement/Actions in the TCanvas-Window:

<u>1 Cursor:</u>
  Press left mouse button and hold it down while you move around the cursor. Release it to position the cursor. To access the context-sensitive popup-menu press right mouse anytime you do not move the cursor. You're able to make a selection from the menu by holding the right button depressed while you're moving thru the menu and releasing it just when you've selected (inverted) the desired command.(It's true, though, that you can make your choice with the left mouse button, too. Doing so, however, obviously requires an additional mouse click, so this might be for the tough ones, who don't care about their 'finger-health')

<u>2 Cursor:</u>
  Press left mouse button and hold it down while you move around the left cursor. Release it to position the left cursor. You'll immediately get control over your second (right) cursor, which you move around by just moving your mouse (no buttons need to be pressed). Position the right cursor by pressing either the left mouse button, which will gain you nothing further, or the right mouse button, which will bring you right way to the great context-sensitive popup-menu.
  Selecting a command from the menu is just the same procedure as described above in the '1 Cursor' section. Remember to use the right mouse button, as you're able to select a ROI (Region Of Interest) and to issue a command on this ROI by only pressing your mouse buttons twice! (I can think of one program -just forgot it's name- which will require you to press your mouse button 5 (in words: *five*) times to achieve the same thing. Now do your own conclusions.)

Mouse Movement/Actions in the TState-Window:

Following mouse actions only valid when done in one of the (currently) six regions displaying identification info for spectra being shown on the screen (TCanvas-window)!

Left button:
  toggle processing of spectrum (if you managed to hit one)
Right button ...
  on filled place:

remove spectrum from screen (with no other mouse buttons being pressed)

remove spectrum from screen **and** from memory (with left mouse button being held down) Caution: this action is especially fatal to all spectrum data that is not in 'Raw-Format', e.g. 1er Fragmente, because such data can not be restored anymore.

on empty place:

display popup menu to select a spectrum from that is to be displayed on the selected place

Menu Commands

All menu commands (including those of the popup menus) are fully self-explanatory - therefore we wanna save memory for spectra at this point.

Just a shortcut is allowed, though!

WinSCHNIPP™ main menu:

File
  Open   accesses the F12 box (spectrum handling box)
  Load
    Spectrum   opens the File Open dialog for loading a spectrum
    Associated Data   loads - if available - data associated with the current spectrum: calibration, TAB-stops, infos on the measurement, etc.
  Save
    Spectrum   allows to save spectrum data that can be chosen within a dialog box
    Associated Data   saves data like calibration, TAB-stops, etc. to a file that resides in a WSD directory (which has to be previously created on the same drive and in the same hierarchy as your LMDATEN directory) with the name *.dat, where * is the original filename of the spectrum w/o extension
  Handling Spectra   currently the same as File Open
  Export   export a definite region of channels of a screen spectrum in various formats: ASCII (which currently is Gnuplot), AutoCAD DXF, Karl's Format (due to compatibility with our old Display™ program, which is 8192 channels only), Microsoft Excel (not yet implemented)
  Print   not yet implemented - which is currently printed is an example from the 'Turbo Pascal für Windows - Object Windows' book
  Exit   just as it says

Edit
  Calibration   do a calibration - up to 5 can be stored, but only one is displayed at a time
  Peak Search   not yet implemented
  TAB-Stops   dialog box for removing TAB-stops from the collection
  Spectrum
    Move   move screen spectrum left or right to meet it with another one - this operation is destructive as data is lost in the hi or lo channels

Smooth	just what it says by doing the following operation two times on a screen spectrum (destructive): *channel[i]:=(channel[i-1] + 2*channel[i] + channel[i+1])/4* (Data Reduction and Error Analysis for the Physical Sciences, Philip R. Bevington, McGraw-Hill Book Company)
Integrate	integrate screen spectrum (destructive)
Differentiate	differentiate screen spectrum (destructive) according to the following algorithm: *channel[i] := (1762*channel[i+3] + 513*channel[i+2] + 58*channel[i+1] - 58*channel[i-1] - 513*channel[i-2] - 1762*channel[i-3]) / 12852*
Expand/Condense	expand or condense a screen spectrum with one channel (the common origin) being fixed and the other two channels determining the expand/condense ratio
Manipulate	add, subtract, multiply, tile (combine several channels to one) a screen spectrum in a non-destructive way
RJB	for our internal use

Listmode Data

Rainer L.	for our internal use
Same Total Mass	generate a spectrum our of 2er fragments with counts at the sum in mass of both the fragments, respectively
Manipulate	add two areas of listmode (not thoroughly tested)

Plot

Undo	not yet implemented
Redo	not yet implemented
1/2 Cursor	switch between one cursor and two cursor operation (menu entry sensitive)
logarithmisch/linear	switch the way the spectra are plotted on the y scale
Baselines	arrange baselines of spectra
Density Map	access the Density Map - if 2er fragments are available

Integration

Automatic	integrates all peaks automatically if calibration is available (this is currently in testing and will take a looong time - if you have a good - fast and reliable - algorithm then please let me know)
Multiple	integrate a certain region of channels divided in multiple sections
History	show the last integrals with spectrum identification,

region of channels and integral value

Options
Statistics	spectrum statistics and measurement infos if available
Settings	settings for customizing WinSCHNIPP™
System Infos	various infos on the program itself and on Windows
Show/Hide Masslist	this is good for absolutely nothing
Show/Hide Toolbar	toggle toolbar to have or have not quick access to the most important functions
Show/Hide Ruler	toggle ruler to have or have not a quick view on the masses you currently zoomed in

Measurement
Parameter	not yet implemented
Start	not yet implemented

Help
Index	if you didn't know it you would not be reading this
About	every program has it, so WinSCHNIPP™ does too

Rule 3

WinSCHNIPP™ is **absolutely** unfailing!

All eventually occurring GP's (General Protection Faults) and UAE's (Unrecoverable Application Errors) are therefore clearly the consequence of errors in operation that mostly are thoughtlessly committed by unfit users.

Apparently holds true: the more WinSCHNIPP™ crashes, the more unfit the user is!

This is in fact really intended by the philosophy of WinSCHNIPP™ to keep the user active in his learning process of using this program.

Introducing The SCWASH™ System

The SCWASH™ (Spectrum Control With A Single Hand) system is one of the great innovations in WinSCHNIPP™ - one of the sort which other programs desire to have but don't.

This systems allows the user to accomplish nearly all the actions necessary to view rather to inspect a spectrum / spectra within a tightly limited area of the keyboard. The cursor keys in conjunction with Pg Up and Down give the user access to spectrum move left rsp. right, spectrum expand rsp. condense relative to the center of the TCanvas-window and spectrum enlarge (yScale++) rsp. reduce (yScale--).

The key bindings are in particular:

⬆ expand spectrum/spectra (similar to F3 - but around center of screen, not center of cursor(s))

⬇ condense spectrum/spectra (similar to F4 - but around center of screen, not center of cursor(s))

⬅ take a left: shift spectrum one notch to the right, i.e. get to see lower channels/masses

➡ take a right: shift spectrum one notch to the left, i.e. get to see higher channels/masses

PG⬆ enlarge spectrum/spectra: yScale++ (same as F1)

PG⬇ reduce spectrum/spectra: yScale-- (same as F2)